

Claims:

1. A method for fabricating a filtering member in which overlapping portions of a wire are bonded together in a layered manner through thermal treatment for forming a mesh, the method comprising:

5 applying a contact surface pressure between portions of the wire to be bonded together; and

maintaining the contact surface pressure as equal to or higher than a predetermined level that is set in accordance with a thermal treatment condition, and conducting the thermal treatment in this state, such that each bonding portion of the wire has a strength equal to or greater than 4 N.

- 10 2. The method according to Claim 1, wherein, when a thermal treatment temperature and a thermal treatment time are specified as the thermal treatment condition, the thermal treatment is performed such that the following inequality is satisfied:

$$4 \leq C1 \times \exp(-C2/T) \times (t/T)^{0.4} \times P \times b^2 \times n$$

5 in which

T: thermal treatment temperature, t: thermal treatment time, P: contact surface pressure, b: lateral contact dimension between contact portions of the wire, n: number of bonding portions of the wire, and

wherein C1 and C2 are coefficients, with C1 = 4,105, and C2 = 9,000.

- 10 3. The method according to Claim 1, wherein:

the filtering member is a coil type filter in which the wire is wound in a layered manner for forming a mesh, and the contact surface pressure is produced by tension applied to the wire during winding of the wire.

4. The method according to Claim 3, wherein a winding end of the wire is fixed while the tension is applied to the wire during winding of the wire.

5. The method according to Claim 3, wherein the contact surface pressure is adjusted by changing the tension applied to the wire during winding of the wire.

6. A method for fabricating a filter for an airbag inflator in which overlapping portions of a metal wire are bonded together in a layered manner through thermal treatment for forming a mesh, the method comprising:

applying a contact surface pressure between portions of the wire to be bonded together; and

maintaining the contact pressure as equal to or higher than a predetermined level that is set in accordance with a thermal treatment condition, and conducting the thermal treatment in this state, such that each bonding portion of the wire has a strength equal to or greater than 4 N.

7. The method according to Claim 6, wherein, when a thermal treatment temperature and a thermal treatment time are specified as the thermal treatment condition, the thermal treatment is performed such that the following inequality is satisfied:

$$4 \leq C1 \times \exp(-C2/T) \times (t/T)^{0.4} \times P \times b^2 \times n$$

in which:

T: thermal treatment temperature, t: thermal treatment time, P: contact surface pressure, b: lateral contact dimension between contact portions of the wire, n: number of bonding portions of the wire, and

C1 and C2 are coefficients, which C1 = 4,105, and C2 = 9,000.

8. The method according to Claim 6, wherein the filter is a coil type filter in which the wire is wound in a layered manner for forming a mesh, and the contact surface pressure is produced by tension applied to the wire during winding of the wire.
9. The method according to Claim 8, wherein a winding end of the wire is fixed while the tension is applied to the wire during winding of the wire.
10. The method according to Claim 8, wherein the contact surface pressure is adjusted by changing the tension applied to the wire during winding of the wire.